CLAIMS

1. In a data processing system having a first processor with a first software architecture, the improvement comprising:

    a. a plurality of emulation objects each executable by said first processor wherein each of said emulation objects emulates operation of a different one of a plurality of target processors wherein each of said plurality of target processors has a software architecture different from said first software architecture.

2. An improvement according to claim 1 wherein each of said emulation object is compatible with said first software architecture.

3. An improvement according to claim 2 wherein at least one of said plurality of emulation objections further comprises an array of procedures compatible with said first software architecture and a list of instructions compatible with a second software architecture.

4. An improvement according to claims 3 wherein said list of instructions includes specialized instructions for communications processing.

5. An improvement according to claim 4 wherein each of said array of procedures corresponds to a one of said list of instructions through the use of an operation code and corresponding four bit field.

6. An apparatus comprising:

a. a first instruction processor having a first software architecture; and

b. a plurality of emulation objects responsively coupled to said first instruction processor

wherein each of said plurality of emulation objects permits said first instruction processor to

emulate a different one of a plurality of target processors and wherein each of said plurality of

target processors has a software architecture different from said first software architecture.

7. An apparatus according to claim 6 further comprising a first computer program having

a first plurality of instructions which are compatible with said first software architecture.

8. An apparatus according to claim 7 wherein said first plurality of instructions further

comprises a specialized communication instruction.

9. An apparatus according to claim 8 wherein a first one of said emulation objects

further comprises an array of procedures and a list of instructions.

10. An apparatus according to claim 9 wherein each of said procedures of said array of

procedures is directly linked to a different one of said list of instructions.

11. A method of emulating a plurality of target processors by a first processor having a

first software architecture incompatible with the software architectures of said plurality of target

processors, the method comprising:

a. executing a first emulation object corresponding to a first of said plurality of target

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processors; and

      b. executing another emulation object corresponding to another of said plurality of target processors.

5   12. A method according to claim 11 further comprising repeating steps b for each of said plurality of target processors.

      13. A method according to claim 12 wherein said first emulation object further comprises a specialized instruction.

      14. A method according to claim 13 wherein said specialized instruction further comprises an instruction for communication processing.

      15. A method according to claim 14 wherein said first emulation object further comprises an array of procedures.

      16. An apparatus comprising:

      a. means having a first software architecture for executing computer instructions compatible with said first software architecture; and

20   b. means responsively coupled to said executing means for containing a plurality of emulation objects wherein each of said plurality of emulation objects corresponds to a different one of a plurality of target processors and each of said plurality of target processors has a software architecture which is incompatible with said first software architecture.

17. An apparatus according to claim 16 wherein a first of said emulation objects further comprises an array of procedures.

18. An apparatus according to claim 17 wherein said first of said emulation objects further comprises a list of instructions wherein each of said array of procedures corresponds to a different one of said list of instructions.

19. An apparatus according to claim 18 wherein at least one of said list of instructions further comprises a communication processing instruction.

20. An apparatus according to claim 19 wherein said list of instructions further comprises a plurality of communication processing instructions.